



### REMARKS

In the Office Action, claims 1-18 were rejected. By the present response, claims 1, 7, 13 and 16 have been amended. No new matter has been added. Upon entry of the amendments, claims 1-18 will remain pending in the present patent application. Reconsideration and allowance of all pending claims are requested in view of the following remarks.

### Rejections Under 35 U.S.C. § 102

#### Claims 1 and 16.

Claims 1 and 16 were rejected under 35 U.S.C. § 102 (b) as being anticipated by Lai (U.S. Patent 6,118,841; hereinafter "Lai"). Applicants have amended claims 1 and 16 to more clearly recite the claimed subject matter. Support for the amendment can be found in the application, on pages 6 and 7, in the discussion with reference to Fig. 3 and Fig. 4. Applicants respectfully traverse the rejection of independent claims 1 and 16, as amended, under 35 U.S.C. § 102 as being anticipated by Lai.

A *prima facie* case of anticipation under 35 U.S.C. § 102 requires a showing that each limitation of a claim is found in a single reference, practice or device. *In re Donohue*, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

Applicants respectfully submit that Lai does not disclose, teach or suggest at least detector sections that are arranged in a *spaced-apart* and asymmetric configuration about a central axis of the field of view.

Lai discloses an interpolation system for generating interpolated constant Z-axis projections from constant speed helical projection data collected by an offset detector system in a computer tomography (CT) imaging system having a rotational source-detector arrangement and means for rotation. In a specific embodiment, Lai discloses a parallel beam converter for generating fully interleaved parallel beam projections from

CSH data collected with an asymmetric offset detector system. *See*, Lai, column 12, lines 18-21. In one embodiment Lai describes detectors that are offset from a center line passing from the radiation source through the rotation axis, and another embodiment where detectors are asymmetrically arranged relative to that center line. *See*, Lai, Abstract.

Lai is completely devoid of any teaching of any specific arrangement of the asymmetric configuration of the detector sections. The asymmetric arrangement is discussed in Lai primarily in reference to prior art (Fig. 11), and in reference to the projection data collection technique, which is what is actually being addressed in Lai (Figs. 18-20). *See*, Lai, column 9, lines 45-55; column 24, lines 10 through column 26, line 60. Nowhere in these discussions or in the drawings does Lai disclose, teach or suggest that the detectors are or even could be arranged so as to be spaced apart from one another, as recited in amended independent claims 1 and 16.

Thus, Applicants respectfully submit that the independent claims 1 and 16 as amended are not anticipated by Lai under 35 U.S.C. § 102 and therefore, are allowable.

Claims 1, 6, 7, 12, 16 and 18, and the claims depending therefrom.

Claims 1-12 and 16-18 were rejected under 35 U.S.C. § 102 (b) as being anticipated by Sohval, et al. (U.S. Patent 4,637,040; hereinafter "Sohval"). Of these claims, claims 1, 6, 7, 12, 16 and 18 are independent. Independent claims 1, 7 and 16 have been amended. Support for the amendments can be found in the application on pages 6 and 7, in the discussion with reference to Fig. 3 and Fig. 4. Applicants have carefully reviewed the applied reference, and respectfully traverse the rejection.

Applicants respectfully submit that Sohval does not teach, disclose or suggest at least (1) detector sections in spaced-apart and asymmetric arrangements about a central

axis of a field of view; or (2) detector sections at a distance apart that is less than the length of the detector sections, or similar recitations of the of independent claims.

Sohval, in general, discloses an X-ray imaging system with at least two distinct point sources of radiation, configured to rotate around the patient and to alternately emit radiation, which pass through the patient and the attenuated X-rays are captured by multiple detectors. *See*, Sohval, column 4, lines 1-9. Sohval's apparatus in one embodiment, uses two detector positions. In one position the detectors are disposed asymmetric with respect to an iso-center. In a second position the detectors are disposed symmetrically with respect to the iso-center. *See*, Sohval, column 4, lines 46-53; column 6, lines 46-50; and column 8, lines 54-61. The iso-center is defined in Sohval as "the center of rotation of the gantry. *See*, Sohval, column 2, lines 21-22. Thus, Sohval does not disclose, teach or suggest arranging detector sections asymmetrically *about the field of view* as recited in independent claims. In particular, Sohval, in direct contrast, discloses arranging detectors in *two* positions, one in which the detectors are arranged asymmetric about the centre of rotation of the gantry (iso-centre), not the field of view as presently claimed.

Further, Sohval is completely devoid of any teaching of arranging detector sections in a spaced-apart arrangement. Applicants respectfully submit that Fig. 3 of Sohval and the corresponding description at column 9, lines 23-31 do not, in any manner disclose, teach or suggest such an arrangement. The space 3' in Fig. 3 merely points to a new position of the entire detector. All of the figures of Sohval clearly show the detector sections immediately adjacent to one another and not in any spaced-apart arrangement. There is absolutely no discussion in Sohval about the spaced-apart detector sections.

Thus, Applicants respectfully submit that the independent claims 1, 6, 7, 12, 16 and 18 are not anticipated by Sohval under 35 U.S.C. § 102, and therefore, are allowable. Claims 2, 5 depend directly or indirectly from claim 1; claims 8, 11 depend directly or

indirectly from claim 7; and claim 17 depends from claim 16. Thus, claims 2, 5, 8, 11, and 17 are similarly allowable.

Applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 102(b) and requests allowance of claims 1-12 and 16-18.

**Rejections Under 35 U.S.C. § 103 (a)**

Claims 13-15 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Sohval in view of Tanaka (U.S. Patent Re 35,848; hereinafter "Tanaka"). Of these, only claim 13 is independent.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988). One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988).

Applicants respectfully traverse the rejection of claims 13-15 under 35 U.S.C. §103 (a) as being unpatentable over Sohval in view of Tanaka. Claim 14 and 15 depend from independent claim 13, which has been amended to recite its subject matter more clearly. As summarized above, Sohval does not disclose, teach or suggest the claim recitations relating to arranging the detector sections in an asymmetric, spaced-apart arrangement about a central axis of the field of view, as recited in independent claim 13. Applicants further submit that, as also summarized above, Tanaka also does not disclose, teach or suggest, these recitations of independent claim 13. Accordingly, no combination of the references could possibly support a *prima facie* case of obviousness of claim 13.

Accordingly, Applicants respectfully submit that the Office Action did not make a *prima facie* case of obviousness for the independent claim 13.

Claims 14 and 15 depend directly or indirectly from amended claim 13. Applicants respectfully submit that independent claim 13, as amended, is patentably distinct from the applied references for the reasons discussed above, and that claims 14 and 15 are similarly allowable over the applied references.

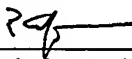


Conclusion

In view of the remarks and amendments set forth above, Applicants respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: 11/24/2004

  
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